Response to Comments
Submitted to EPA
Jan 11, 2007

Summary of comments received on MassDEP's proposed revisions to Surface Water Quality Standards, 314 CMR 4.00, and MassDEP's responses

1. Applicability: Several commenters stated that the WQS should apply to all activities and not just discharges.

Response: There are many activities that potentially can affect water quality. MassDEP is not of the opinion, however, that the water quality standards are the appropriate place to address all of these potential water quality impacts. Many such activities already are regulated under other MassDEP programs and statutes, such as the Wetlands Protection Act and the Water Management Act. Still other activities, such as the emission of GHG leading to global warming and the consequent increases in water temperature, although they can affect water quality, simply would not be appropriately within the jurisdiction of the State's surface water quality standards. The scope of the WQS generally does not extend to activities beyond discharges. Examples of exceptions to this include cooling water and desalinations intake structures, both of which are associated with discharges and both of which are not regulated adequately under other programs.

2. Vernal pools: EPA, in particular, indicated that all surface waters subject to federal jurisdiction should be covered by the WQS, including all vernal pools subject to federal jurisdiction.

Response: The WQS currently define vernal pools as those certified by the Massachusetts Division of Fisheries & Wildlife (MassDF&W). There are an estimated 30,000 vernal pools that are not certified. A number are located in wetlands resource areas and receive protection when reviews are done of projects under the Wetlands Protection Act. For the remainder, the location is not always known and/or the appropriate standards for protection are not clear. In light of EPA's proposed rulemaking following the *SWANCC* decision, and the uncertainty over which waters EPA ultimately will consider to be federal waters, the program thinks it is premature for MassDEP to revise the WQS to cover all vernal pools that are subject to federal jurisdiction. Once EPA identifies the federal waters that are not covered by the WQS, then MassDEP will be in a better position to meaningfully assess appropriate water quality standards for such waters. Putting the issue of uncertified vernal pools aside, DEP is not aware of any other potentially federal waters that would not be covered by the WQS.

3. Flow/water quantity: Numerous commenters stated that the WQS should address adequate stream flow and apply to water quantity.

Response: MassDEP recognizes the importance of water quantity as well as quality. Massachusetts is one of the few states that has an active statewide program for addressing water quantity issues through its Water Management Act. While MassDEP understands and agrees with concerns about water quantity, we do not believe that the surface water quality standards are the correct way to address those concerns. At this time, Massachusetts has other vehicles, such as the Water Management Act, to address admittedly important flow questions. We also have been working with EOEA departments on information to improve our permitting decisions with better science, which should lead to more protective permits. MassDEP already has begun to incorporate flow related protections into other program permits as well as to address flow issues in both our Stormwater Management Policy as well as our Integrated Water Resources Management Planning requirements. We agree that water quantity is a significant problem, but think that the problem cannot be solved through the water quality standards.

4. Harmonic mean flow/hydrologic conditions: Comments on the definition and use of harmonic mean flow included that the use of the harmonic mean flow may be less protective than 7Q10, it leads to confusion, it should be omitted, the term is incorrectly defined.

Response: EPA guidance (Water Quality Standards Handbook) recommends using the harmonic mean flow to regulate the concentration of known or suspected carcinogens. MassDEP considers this guidance in line with other guidance from EPA on water quality standards and criteria. MassDEP considers the protection afforded by using concentrations based on the harmonic mean flow as sound science and a protective approach. MassDEP still would consider other approaches if site or chemical specific characteristics warranted. The definition of harmonic mean flow is being corrected as follows: "Harmonic mean flow is a long term flow value calculated by dividing the number of daily flows analyzed by the sum of the reciprocals of those daily flows." Additionally, we have revised the WQS language to provide that human health based criteria "may" rather than "shall " be applied at the harmonic mean flow, affording MassDEP flexibility to apply other approaches.

5. Definition of cold water fishery: The MA Division of Fisheries & Wildlife (MassDF&W) commented that this definition should give equal weight to biology as well as temperature, that the presence of a reproducing coldwater fish population should be adequate.

Response: With the exception of providing that the temperature in the definition is based on a seven day, rather than a monthly mean, we have not revised the definition further as it could lead to unintended consequences. (See, also, our responses to comments on Cold Water Fisheries, #27 below).

6. Definition of lakes and ponds: A commenter stated that only kettle ponds would be included under the definition of lakes and ponds, others asked aboiut the purpose of the revision.

Response: MassDEP is not sure how this interpretation was reached. The intent of the proposed definition is, in part, to distinguish between natural features, particularly open water marshes, and lakes in distress from eutrophication. The Department has encountered cases in which marshes have been proposed as impaired lakes when, in fact, they are a natural and productive wetland. The purpose of the revision also is to distinguish between generally flowing waters, to which river and stream criteria apply, and standing water, to which lake or impoundment criteria appropriately would apply.

7. Definition of Natural Background Conditions: Comments on this issue included that a specified process/methodology is needed for how natural background will be determined, including a process for public comment; defining natural based on lack of human activity ignores the fact that humans are part of the natural environment and the WQS would be impossible to achieve; natural background should be protected regardless of whether it is necessary to protect uses; the definition is unrealistic; in the permitting and TMDL contexts, DEP must take into account background, which should continue to account for human activities; the definition would improperly affect other provisions – pH, temperature, basis for establishing a violation, etc.; the WQS need to recognize long term conditions such as flow and temperature.

Response: Based on the comments, we have not proceeded with a definition of natural background and, instead, have retained the existing definition of "Background Conditions" which we had proposed to delete.

Background Conditions - That water quality which exists or would exist in the absence of discharges of pollutants requiring permits and other controllable cultural factors that are subject to regulation under M.G.L. c. 21, §§ 26 through 53.

8. Definition of secondary contact recreation - inclusion of fish & shellfish consumption in: A couple of commenters questioned the addition of language, in the definition of secondary contact recreation, addressing the human consumption of fish and shellfish and commented that it would be better to address this elsewhere in the WQS.

Response: With respect to this issue, an EPA Headquarters Office of Water memorandum, dated 10/24/2000, states, in part as follows: "EPA interprets "fishable" uses under section

101(a) of the CWA to include, at a minimum, designated uses providing for the protection of aquatic communities and human health related to consumption of fish and shellfish. In other words, EPA views" fishable" to mean that not only can fish and shellfish thrive in a waterbody, but when caught, can also be safely eaten by humans. This interpretation also satisfies the requirement that water quality standards protect public health. Including human consumption of fish and shellfish in the definition of section 101(a) "fishable" uses is not new...." Accordingly, we view it as appropriate to include fish consumption as a component of the use of fishing.

9. Wetlands: A commenter stated that wetlands should be defined as bordering vegetative wetlands. (The WQS currently do not define wetlands.)

Response: Wetlands subject to protection under the WQS are not limited to bordering vegetative wetlands. Wetlands potentially within the scope of the WQS would include wetlands subject to federal jurisdiction as well as those subject to state jurisdiction. MassDEP is monitoring guidance being developed by EPA on water quality in wetlands and anticipates addressing protection of wetlands further in subsequent reviews of the WQS.

10. TMDLs: Comments and questions on the TMDL (Total Maximum Daily Load) language included that TMDLs should apply to all activities not just pollutants, the WQS should clarify that TMDLs are dependent on specified water quantity, what is the authority for addressing TMDLS in the WQS, how is the margin of safety set, how will nonpoint sources be dealt with, TMDLs should be promulgated separately and subject to appeal.

Response: TMDLs represent the maximum amount of a constituent that can enter a water body and still have it meet water quality standards. Under Section 303(d) of the Federal Clean Water Act, waters not meeting state standards are to be listed as impaired. The Federal Clean Water Act further requires that waters listed as impaired must have TMDLs developed for the pollutants causing the failure to meet water quality standards. TMDLs are divided into the portion from natural background, that from point sources, that from nonpoint sources and then a margin of safety. In accordance with EPA guidance, the margin of safety can be expressed either explicitly (e.g., 5% of the numeric value of the TMDL) or implicitly (e.g., conservative assumptions). In either case, the margin of safety is explained in the TMDL itself. TMDLs are subject to public review at the state level and then require EPA approval. A TMDL is not final until EPA issues its approval. Consistent with applicable caselaw, the EPA approval is subject to appeal. We further note that in accordance with state law, any party aggrieved may appeal a surface water discharge permit that includes effluent limitations based on a duly established TMDL. Nonpoint sources, to a large extent, are addressed on the local level using a statewide framework, such as that for subsurface disposal systems (the Title 5 regulations), and for activities regulated under the Wetlands Protection Act, as well as under MassDEP's Stormwater Policy.

11. Compliance schedules in permits: Comments on the provision on compliance schedules included that the provision should clarify that a permittee under a compliance schedule is immune from third party suit and that the availability of compliance schedules should not be limited.

Response: Given that third party suits arise under the Federal Clean Water Act, the state WQS are not an appropriate place to address this legal issue. With regard to the comment that the availability of compliance schedules should not be limited, the provision is drafted to be consistent with MassDEP's understanding of relevant law on the issue, which provides limitations on when compliance schedules may be allowed. The WQS language, which acknowledges that the purpose of compliance schedules generally is to afford a permittee time to comply with permit requirements or limitations that are based on new, newly interpreted or newly revised WQS, does not preclude compliance schedules in other appropriate circumstances consistent with applicable law. With respect to the issue of review or appeal of compliance schedules, the terms of a compliance schedule set forth in a permit would be subject to review and appeal as are other provisions of a permit.

12. Effluent limitations/reasonable margin of safety: A few commenters took issue with the lack of specifics on MassDEP's determination of a reasonable margin of safety.

Response: MassDEP's determination of a reasonable margin of safety to account for lack of knowledge about the relationship between pollutants being discharged and their impact on water quality would be based on a variety of factors and, therefore, the determination does not lend itself to a set percentage or a single approach to be specified in the WQS. The Department must have flexibility to base such determinations on relevant guidance documents, site specific factors and the particular pollutants discharged, coupled with potential synergistic effects. The effluent limitations MassDEP proposes to include in a discharge permit are subject to review. Permits first are issued in draft form, are subject to review and comment and then issued in final form, then are subject to appeal. There, therefore, is a process in place for the review of MassDEP determinations of the effluent limitations in any given discharge permit.

13. Mixing Zones: Comments on the mixing zone language included that the proposed no lethality language is unclear and could weaken the WQS; the "beyond" and "interfere with" language is vague, inappropriate and unnecessary; the current language is clearer; the new language eliminates DEP's ability to use mixing zones as originally intended; it should be clarified that lethality is acute, not chronic; the provision is too stringent; a procedure for determining lethality should be set.

Response: MassDEP is using language provided in EPA's guidance to address lethality in the context of mixing zones. Relative to lethality, only the acute criterion is involved since the chronic criterion applies to reproduction, not death, of the individual. The language regarding protection of uses beyond the mixing zone is to protect critical resource areas as also mentioned in EPA's guidance. Finally, the potential for toxicity may be determined by hydraulic or biological measures or a combination of the two. Therefore, some judgment is likely to be required by MassDEP and the proposed wording is intended to acknowledge this reality. Any proposed discharge permit, including any associated mixing zone, is subject to review as part of the permitting process.

14. Variances: Comments regarding variances included that the study design should be subject to public review and comment, long term variances and extensions should be treated differently than variances, which are defined as temporary, and existing uses must be protected.

Response: Variances and extensions are subject to public notice and review. EPA also reviews MassDEP's variance determinations. During that process, the conditions of the variance, which generally reflect the study design, among other factors, are subject to public input. Additionally, even prior to the time a variance or variance extension is drafted for public review, interested persons following the process may submit comments on the study design. With respect to the term of variances, longer term variances and variance extensions still are temporary in nature and serve the same purpose of less lengthy variances. That is, they afford an appropriate period of time for a determination to be made as to whether compliance with the WQS can be achieved and uses can be protected. This determination can be made generally only after extensive evaluation, often coupled with substantial work, public review and input, all of which can take considerable time. For the duration, the discharger is required to implement specified steps with the goal of protecting uses.

15. UAA/economic impact: Commenters objected to the proposed modification of the provision on UAAs and the required demonstration of substantial and widespread economic and social impact as potentially resulting in the allowance of water quality degradation in poorer communities. Commenters noted that while cost of living factors might be appropriate to consider in a UAA, the WQS should not indicate their acceptability.

Response: MassDEP has modified one basis for removal of a national goal use, designation of a partial use or granting of a variance by adding to the demonstration of: "Controls more stringent than those required by sections 301(b) and 306 of the Act would result in substantial

and widespread economic and social impact" the language "this demonstration may include documentation of median household income or other economic measures as adjusted to reflect the cost of living or other circumstances particular to the affected area."
The intent is not that the newly allowed economic information alone would satisfy a demonstration of widespread economic and social impact, but, instead, that the Department could take such information into account when reviewing an applicant's proposed demonstration of substantial and widespread economic and social impact. As cost of living differs in various parts of the nation, with housing costs, in particular, in this area being a high percentage of income, it makes sense to allow such factors to be taken into account when assessing whether the costs of more stringent pollution controls would have a substantial economic impact in any given area. Further, while it is not MassDEP's goal to allow for less water quality protection in communities with relatively lower incomes, at the same time, MassDEP also wants to leave the door open to a demonstration that a community would, in effect, be overly burdened by the imposition of extremely stringent pollution controls in all circumstances. Finally, any proposed removal of a national goal use, designation of a partial use or issuance of a variance would be subject to public notice, review and comment. EPA review and approval also comes into play. Accordingly, any particular UAA demonstration and DEP determination in this regard would be subject to significant scrutiny.

16. Antidegradation applicability: Comments on this issue included that antidegradation review should apply to all activities that are subject to regulatory programs that require compliance with the WQS and not just to discharges, that antidegradation review should apply to activities other than discharges, such as withdrawals.

Response: As the scope of the WQS generally does not extend to activities beyond discharges, the antidegradation provisions likewise generally would not apply to activities other than discharges. Examples of exceptions to this include activities such as cooling water and desalinations intake structures, both of which are associated with discharges. Accordingly, the antidegradation provisions are not being expanded to cover activities that are not covered by the WQS as a whole. As discussed in response to other comments, other activities, such as withdrawals and certain land alterations, already are regulated adequately under other programs – e.g. the Water Management Act or the Wetlands Protection Act.

17. High quality waters: Comments on this issue included that MassDEP should clarify that high quality water protection is not limited to waters that are denoted as high quality in the tables to the WQS.

Response: MassDEP has clarified this in the final version of the WQS.

18. Special Resource Waters & Outstanding Resource Waters process/method for designation: Many commenters asked about the process for ORW and SRW designations, another questioned the meaning of short term and temporary in the context of allowable discharges to SRW. It was suggested that the Natural Heritage Program be involved in SRW designations.

Response: MassDEP is updating the application process for nominating a water for ORW designation to address proposed Special Resource Water designations as well. The process calls for environmental, regulatory and other appropriate information to support a proposed designation. Regardless of whether the proposal were initiated by MassDEP or the result of nomination by an outside entity, any ORW or SRW designation would be accomplished through a WQS revision, which would be subject to public notice, review and comment. Comments from the Natural Heritage Program would be welcome and could prove to be a valuable part of the process.

Relative to the meaning of short term and temporary in the context of allowable discharges to a SRW, according to EPA guidance on this issue, generally, "temporary" and "short-term" mean weeks or months and not years. When temporary or short-term degradation is allowed, all practical means of minimizing the degradation must be implemented. Further, the degradation must be limited to the shortest time possible.

19. Antidegradation authorization process for ORWs: Federal agencies commented that if a proposed discharge to an ORW is deemed significant, then the authorization process must include a demonstration that the discharge is necessary to accommodate important economic or social development in the area in which the waters are located (This demonstration applies to discharges to high quality waters where there has not been a determination of insignificance.)

Response: MassDEP did not propose to revise the antidegradation authorization requirements that are applicable to discharges to ORWs. For discharges to ORWS, regardless of whether the proposed discharge and degradation are deemed insignificant, an antidegradation authorization is required by 4.04(3)(b). Additionally, the WQS prohibit new or increased discharges to ORWs unless, among other things, MassDEP determines that the discharge is for the express purpose and intent of maintaining or enhancing the resource for its designated use. The vast majority of ORWs are Class A designated public water supplies, including their tributaries. It generally is implicit in a determination that a discharge to a public water supply source/ORW is for the express purpose and intent of maintaining or enhancing the supply for its designated use that the discharge also is necessary to accommodate important economic or social development in the area. The antidegradation authorization requirements in 4.04(5)(a)2 through (a)4, which apply to discharges to ORWs, also provide that the discharger must, among other things, demonstrate no less environmentally damaging alternative site for the activity, source for disposal or method of elimination of the discharge is reasonably available or feasible, and, to the maximum extent feasible, the discharge and activity are designed and conducted to minimize adverse impacts on water quality. And, as with all discharges, existing uses must be protected. In light of these requirements, the WQS are adequately protective of ORWs. Further, the State's MEPA regulations (310 CMR 11.00) require an ENF and mandatory EIR for a new or increased discharge of sewage, industrial wastewater or untreated stormwater to an ORW.

20. Antidegradation authorization process for SRWs: US Fish & Wildlife Service commented that it is inappropriate to apply to proposed discharges to SRWs the requirement for a demonstration that the discharge is necessary to accommodate important economic or social development in the area in which the waters are located because it is unlikely that the demonstration could be made.

Response: MassDEP agrees with this comment. Particularly in light of the fact that discharges to SRWs may be allowed only when any changes in water quality would be short term or temporary, the proposed requirement seems unnecessary as well as unrealistic. Accordingly, MassDEP has not included the requirement for a demonstration of important economic or social development in connection with discharges to special resource waters.

21. Antidegradation authorization process exemption for certain remedial discharges and certain discharges subject to an administrative order: EPA voiced concerns regarding the antidegradation authorization exemptions for discharges necessary to abate an imminent hazard and discharges required under an enforcement order to improve water quality. Specifically, EPA indicated that it is unclear whether existing uses must be protected as required by federal regulations. Additionally, EPA requested clarification as to whether the exemption for discharges required to improve water quality must be to the same waterbody that is being improved, which EPA indicates would be an acceptable exemption. EPA further requested that the provision exempting discharges that are necessary to abate an imminent hazard require a demonstration of the use of the most cost effective pollution prevention and treatment techniques and minimization of the necessary lowering of water quality.

Response: These EPA's comments pertain to the existing WQS and not to proposed revisions to the WQS. Protection of existing uses is a requirement under the WQS for all discharges, including discharges that could be exempt from the requirement for an antidegradation authorization. The provision "Protection of Existing Uses" specifically provides: "In all cases

existing uses and the level of water quality necessary to protect the existing uses shall be maintained and protected."
With respect to discharges required under an enforcement order to improve water quality or prevent water quality from deteriorating, such discharges automatically are not exempt from the requirement for an antidegradation authorization, but, instead, may be exempted by a decision of the Department. Such discharges would occur rarely, and such discharges to a water different from the water being improved would be even rarer. Additionally, such discharges generally would be temporary in nature. In the unlikely event that a case were to arise where MassDEP might consider exempting a discharge to a water that is not the same water body segment that is the subject of the effort to improve water quality, then MassDEP most likely would have determined first that the discharge would be insignificant. Finally, the regulations afford MassDEP the flexibility to exempt a discharge from the antidegradation authorization process when the discharge is necessary to abate an imminent hazard. There may be circumstances in which there simply is not adequate time to complete the full antidegradation authorization process upfront. In those circumstances, MassDEP may allow the discharge to commence. Such discharges and any potential resulting degradation generally would be temporary in nature and any lowering of water quality would be required to be minimized.

22. Existing discharges to ORWs: Several commenters noted that the current requirement that existing discharges to ORWs be connected to POTWs where possible ignores the need for flow/recharge and that existing discharges to ORWS, therefore, should be allowed to continue so as to sustain flow, provided that water quality is protected.

Response: MassDEP acknowledges that this comment may have some merit, particularly with respect to protection of habitat. The Department will consider this revision the next time it proposes to revise the WQS. At this time, this would be a significant revision of the WQS, which had not been subject to public review.

23. Perceived reduction in public input: a) A commenter noted the proposed elimination of the provision at 314 CMR 4.04(6), which provides, among other things, that before "authorizing a discharge all appropriate public participation and intergovernmental coordination shall be conducted in accordance with 314 CMR 2.00." The commenter stated that the change did not appear in the public hearing version of the WQS and commented that the change reduces public input.
b) The commenter also construed the revisions to 314 CMR 4.03(4) as resulting in a reduction in public input and an expansion of the opportunity for partial use, the commenter also indicated that partial use is a temporary reduction in water quality.

Response: a) The elimination of 314 CMR 4.04(6) would not result in a reduction in public input as all requirements in 314 CMR 2.00, which, among other things, sets forth public input procedures applicable to discharge permitting, remain unchanged. We had proposed to eliminate 314 CMR 4.04(6) from the WQS as we viewed it as redundant - the public notice and input procedures in 314 CMR 2.00 are not being changed. MassDEP did not intend for the proposed revision not to appear in the public hearing version of the WSQ; however, we realize that the proposed revision did not appear. We have retained the provision in the final WQS.

b) The commenter has misconstrued the revisions to 314 CMR 4.03(4). The revisions do not expand the opportunity for partial use. Instead, the revisions indicate the difference between a variance and partial use. The public input process and procedures for partial use remain unchanged - in order for a partial use to be issued, a UAA is required, which would be followed by a WQS revision. Partial use means that all uses cannot be attained all of the time after implementation of approved long term control measures and, therefore, it results in partial removal of a use. The WQS require prior public notice and a public hearing pursuant to M.G.L. c. 30A. A variance from WQS, on the other hand, as is explained in the revised language, is issued for a specified period of time for a particular discharger so that it can be determined through scientific study whether uses ultimately can be attained. A variance, unlike a partial use, is temporary and, therefore, it does not trigger a WQS revision - a use is not being partially removed. As stated in the revised 314 CMR 4.03(4), prior to granting a

variance, public notice and an opportunity for public hearing are required pursuant to 314 CMR 2.00. The process essentially is that M.G.L. 30A requirements are triggered by the proposed issuance of a partial use because it results in the removal of a use for part of the time and a WQS revision. The process applicable to a variance, on the other hand, is that contained in the permitting procedures in 314 CMR 2.00 because a variance is only temporary in nature and does not result in the removal of a use or a WQS revision.

24. Site specific criteria: Comments on this topic included that methods and a public rulemaking and appeal process should be included in the WQS. Some commenters opposed the language allowing for less stringent criteria to be adopted, others stated that a WQS revision should be required for adoption of more stringent as well as less stringent site specific criteria; a UAA should be required for less stringent criteria.

Response: One primary goal of the WQS is to set criteria that have a sound scientific basis and that are protective of uses, whether they are more or less stringent than the criteria originally developed. A use attainability analysis is required only when a use is removed. Otherwise, revised criteria, including any site specific criteria, must remain protective of existing and designated uses. Additionally, revisions to water quality criteria do not translate into less stringent discharge permit limits if permit limits, based on more stringent criteria, have been met in the past (this is referred to as antibacksliding). The final WQS language does not make a distinction between the process for adoption of more and less stringent criteria and either result would be reflected in a WQS revision.

25. Uses other than public water supply for Class A waters: Several commenters stated that Class A waters must include as designated uses the national goal uses of "fishable/swimmable" in order to meet the requirements of the Federal Clean Water Act.

Response: While acknowledging the potential for circumstances in which activities necessary to protect the use of drinking water could be inconsistent with the uses of fishable/swimmable, we generally agree with the comments. In both the Safe Drinking Water Act and in guidance for it EPA recognizes the principle of managing not only the watershed, but also the water body to protect water supplies. MassDEP expects such management practices to be consistent with protecting ecological balance, despite the fact that they may involve displacing some elements, such as excessive congregations of seagulls or beavers, which threaten the sanitary quality of source water. We expect that efforts to protect water supply quality, to the extent possible, will be consistent with protection of other uses. Accordingly, consistent with the comments received, we have clarified the Class A language to reflect designation of the national goal uses.

26. Inland and marine waters dissolved oxygen criteria: The percent saturation requirements should remain since it is a valuable indicator. Also, do the dissolved oxygen criteria apply to a manmade waterbody?

Response: MassDEP agrees that percent saturation of dissolved oxygen is a useful measure to consider when evaluating a waterbody, but percent saturation lacks the biological role that concentration represents. Concentration, therefore, is the more scientifically sound measure upon which to base the water quality criteria. This distinction is reflected in EPA's extensive work and guidance for establishing dissolved oxygen criteria, which involve only concentration, for marine waters in the Virginian province (Cape Cod to Cape Hatteras). With respect to the issue of manmade waters, the dissolved oxygen criteria, as well as the WQS in general, apply to all surface waters considered waters of the Commonwealth. For instance, an impoundment on a river is a water of the Commonwealth, but an isolated constructed farm pond would not be.

27. Cold Water Fisheries/temperature criteria: Comments on this topic included that waters should be designated cold water fisheries (CWF) based on more than only the presence of cold water fish populations and the CWF definition should include waters where cold water fish and/or CWF habitat are present. Commenters also stated that the WQS should include protection of necessary stream flow, temperature criteria should be daily maximum/acute and

chronic metric based on a weekly/seven day (not 30 day) average and the rise in temperature due to a discharge should be limited to 1° C per hour and not exceed 3° C in 12 hours. Still others stated that the criteria should be based on a 30 day average.

Response: MassDEP believes that the presence of a reproducing cold water fish population coupled with compliance with cold water criteria currently is the soundest scientific basis for a CWF designation. It is not clear that habitat requirements alone are sufficiently well defined to be able to infer that a cold water fish population should exist when one is not found in what appears to be a suitable location. Also, consultations with MassDF&W indicate that in their experience, areas suitable for coldwater populations do not always support them. MassDEP would work towards restoring water quality for an area from which a documented cold water fish population had disappeared if it were considered an existing use (i.e., present anytime after November, 1975, as defined in the Federal Clean Water Act and the WQS.). If a water is found to meet the MassDF&W protocol and is not listed as a cold water in the WQS, the cold water fish population and supporting habitat receive protection as an existing use. The WQS specifically require this. Regarding flow, while MassDEP agrees flow is an important factor in habitat, flow is addressed under other MassDEP programs and policies.

With regard to temperature, MassDEP considers the average daily temperature a protective and practical criterion given the natural variation one encounters. MassDEP has the authority to limit a discharge further to protect an existing use (in this case, a cold water fish community). MassDEP agrees that a weekly average is a more relevant criterion than the 30 day average, the seven day average is more consistent with the limited information on this topic presented in EPA's 1976 guidance, which still is in use. While not discussing duration of nonlethal conditions in great detail, several of the citations refer to a seven day average, MassDEP considers this limited, but useful, support for using the seven day average. Accordingly, we have clarified the cold water temperature criteria and definition so that the maximum of 68 degrees is based on the mean of the maximum daily temperature over a seven day period.

28. Inland waters temperature criteria/natural seasonal and daily variations: Some commenters stated that the requirement to maintain natural seasonal and daily variations in temperature should apply to all activities, not just discharges. Others stated that natural seasonal and daily variations should be retained regardless of whether they are necessary to protect uses.

Response: Requiring that "natural" variations be maintained, in its strictest application, would mean no change at all even if a change were innocuous. Certain waters may qualify for such a restriction, but the WQS generally are meant to protect uses, rather than preclude all discharges that might affect water quality. The general goal of protecting uses is captured by ensuring that necessary variations are maintained. As discussed previously, the overall applicability of the criteria to activities other than discharges generally is limited to activities that are associated with discharges, such as cooling water intake structures and desalination intake structures. As explained above, MassDEP implements other programs that address other activities' impacts on the environment under, for example, the Wetlands Protection Act and the Water Management Act.

29. Inland waters bacteria criteria: Comments on the fresh water criteria included that bathing beach criteria should apply to all Class B waters; SSMs should apply to all fresh waters; Class C criteria are too high; the WQS should contain a single sample maximum (SSM) or 10% rule for Class C; E.coli is a subset of fecal, therefore, the E.coli criteria should be lower than previous fecal criteria; five samples should not be required for the geometric mean; it should be clarified that both indicators do not apply; Class B criteria are less protective, particularly for nonbathing beach waters and filtered water supplies; a higher SSM for nonbathing beach waters and bathing waters during the nonbathing season could be supported; new Class A criteria for unfiltered water supplies are not stringent enough; new Class A criteria for unfiltered water supplies are too stringent.

Response: Based on the comments received, the WQS now contain the more stringent bathing beach geometric mean criteria for all Class A and Class B primary contact recreational waters. Likewise, based on comments received, we have included in the WQS for such waters the SSM values we had proposed for official bathing beach waters. Relative to the issue of a minimum of five samples for the geometric means, we have indicated in the WQS that "typically" five valid samples are needed, which addressed instances where five valid samples in fact have not been obtained. MassDEP generally does not use sampling results based on fewer than five samples for Clean Water Act purposes such as assessment and listing as for such purposes, decisions on bacterial contamination ideally should be made on a more sound scientific basis, i.e. a greater number of samples. This overall approach is consistent with EPA's guidance, which states that the geometric mean is the better measure upon which to base assessments. Our monitoring program is designed to collect a minimum of five samples during the recreational season during all but dangerous weather, so the reality has been and is expected to be that most of the time, we should have five valid samples. If more than one, but fewer than five valid samples are available for a location and concentrations in those samples are substantially greater than the water quality criteria, the segment would be listed as impaired. Also, generally, the locations with higher results would be the highest priority for additional sampling.

Additionally, have clarified that either E. coli or enterococci apply to Class A and B waters, but that the criteria for both indicators do not apply. The use of the new indicator organisms and values are consistent with the latest EPA bacteria criteria guidance for primary contact recreational waters. According to that guidance, the new primary contact recreational criteria are intended to provide the same level of protection as the previous fecal coliform bacteria criteria, with the new indicators being more reliable as they have a stronger correlation to swimming associated gastrointestinal illnesses than fecal coliform.

The revised criteria for Class A water supply sources, both filtered and unfiltered, are consistent with the MassDEP Drinking Water Program's regulations' approach to protection of public water supply sources. Because when we initially adopted the WQS, the current requirement for filtration of public water supplies was not in effect, the WQS did not make a distinction between filtered and unfiltered supplies. The WQS revisions reflect this change in approach to regulation of public water supplies. The change does not change the protection these waters are accorded in the WQS as Outstanding Resource Waters.

Bacteria criteria for Class C waters. Consistent with our revisions to the bacteria criteria for Class A and B non official bathing beach waters, the final geometric mean bacteria criterion for Class C waters is 630 E. coli per 100 ml., which is five times the criteria for primary contact recreation. (In the previous WQS, the Class C bacteria criterion was five times that for primary contact recreational waters.) With respect to bacteria criteria for secondary contact recreational waters, EPA has stated in guidance that "states and authorized tribes may wish to adopt a criterion five times that of the geometric mean component of the criterion adopted to protect primary contact recreation, similar to the approach states and authorized tribes have used historically in the adoption a secondary contact criterion for fecal coliforms." In further response to comments, we have retained a 10% criterion as well as clarified that the geometric mean "typically" is based on at least five samples.

30. Protection of anadromous fish spawning habitat: Mass Division of Marine Fisheries suggested a variety of ways the WQS could address protection of anadromous fish and their spawning habitat including: a definition of anadromous fish spawning habitat, which would be based on waters so designated by DMF. inclusion of such waters as special resource waters, and consideration of this habitat as a subclass of aquatic life use.

Response: MassDEP views its addition of the language: "including for their reproduction, migration, growth and other critical life functions" to the use of aquatic life habitat under each Class of water in the WQS as protective of anadromous fish spawning habitat. MassDEP, however, looks forward to working with MassDMF, in the context of preparing for future WQS revisions, to ensure that the WQS adequately protect such habitat. Protection of such habitat as special resource waters would be an option to consider.

31. Marine waters bacteria criteria: Certain dischargers commented that DEP should have flexibility to adopt other than enterococci as an indicator organism in nonbathing beach waters as meeting enterococci can require an increase in chlorine, which, in turn, results in increased toxicity and chlorine byproducts. Also, dischargers might not be able to meet limits based on enterococci; others commented that all primary contact recreational marine waters should have an SSM.

Response: Because EPA already has promulgated bacteria criteria for primary contact recreational coastal waters in Massachusetts, (see November 16, 2004 Federal Register Notice of Final Rulemaking), MassDEP does not have the flexibility to adopt alternative criteria without a demonstration, accepted by EPA, that such alternative criteria would be as protective as the EPA criteria. With respect to implementation of the new criteria, where necessary, MassDEP intends to provide up to a complete permit cycle (five years) for individual dischargers to come into compliance with the new bacteria criteria. Moreover, notwithstanding the new criteria, the Department will be assessing whether it may continue to base effluent limitations on fecal coliform, rather than enterococci, for discharges to marine waters. Additionally, we have adopted SSM criteria for all primary contact recreational marine waters, i.e. Class SA and SB. With respect to the Class SC criteria, similar to the approach we are taking with Class C waters, we have retained a 10% criterion as well as clarified that the geometric mean is "typically" based on at least five samples.

32. Desalination intake structures: EOEA commented that the WQS should include a statement indicating MassDEP's authority to regulate desalination intakes and discharges.

Response: The omission of language clarifying the applicability of the WQS to desalination intakes was an oversight on the part of MassDEP. The WQS apply to these intakes to ensure that they are protective of existing and designated uses. MassDEP, therefore, has added language to the WQS clarifying its authority to condition such intakes on compliance with the WQS. As the need for and use of desalination increases, it is important that desalination activities receive appropriate scrutiny under the WQS. The inclusion of clarifying language in the WQS is intended to ensure that this will occur. MassDEP agrees with the above commenter that MassDEP's authority also applies to the withdrawal activity and discharge associated with a desalination facility.

In MassDEP's experience, the withdrawal of salt water for desalination purposes is an activity that reasonably results, directly or indirectly, in a discharge of process water (i.e., pollutants[1]) to waters of the Commonwealth. Thus, MassDEP has the authority under the MA CWA, in the above circumstances, to condition the withdrawal structure of a desalination facility to assure compliance of the withdrawal activity with the WQS. In addition, under Section 401 of the CWA, where a discharge triggers application of the water quality certification provisions thereunder, MassDEP may place conditions on the permittee's activity as a whole to assure compliance with the WQS or other state law.

MassDEP also agrees with the above commenter that it is appropriate to expressly affirm in the WQS that MassDEP has the authority to condition an intake structure of a desalination facility to assure compliance with the WQS. MassDEP expects an increasing number of discharge permit applications for desalination facilities in Massachusetts and recognizes the potential for WQS impacts associated with withdrawals by desalination facilities. As with CWISs, adding language to the WQS addressing intake structures of desalination facilities puts the regulated community on notice that MassDEP has the authority and responsibility under Section 401 of the CWA and state law to evaluate, and if necessary, condition these intake structures to assure compliance with the WQS. As noted by the commenter, an express

---

[1] "Pollutant" is broadly defined under the MA CWA to include "any element or property of...industrial or commercial waste...or other matter, in whatever form and whether originating at a point or major nonpoint source, which is or may be discharged, drained or otherwise introduced to any...treatment works or waters of the commonwealth."

regulatory affirmation in the WQS of MassDEP's authority in this area will also support the implementation of the Commonwealth's Desalination Policy.

Accordingly, in response to the above comments, MassDEP is adding the following language to the description of Class SA waters at 314 CMR 4.05(4)(a) and the description of Class SB waters at 314 CMR 4.05(4)(b):

"in the case of an water intake structure (IS) at a desalination facility, the Department has the authority under 33 U.S.C.§1251 (FWPCA §401), M.G.L. c. 21, §§26 through 53 and 314 CMR 3.00 to condition the IS to assure compliance of the withdrawal activity with 314 CMR 4.00, including, but not limited to, compliance with the narrative and numerical criteria and protection of existing and designated uses."

33. Nutrient provision and HBPT: Comments on the proposed definition of HBPT and the use of the term included: what is the intent of the inclusion of the word "regional" in the definition, the term should be defined in terms of cost effective rather than economically achievable technologies, the terms "economically achievable" and "best performance technologies" should be defined; HBPT may not be stringent enough, and the most appropriate treatment must be based on demonstrated need/scientific basis. Relative to BMPs for nonnpoint sources, questions included what is cost effective and what is reasonable.

Response: The WQS mention HBPT in the revised narrative nutrient criteria provision, which provides, in part, that existing point source discharges of "nutrients in concentrations that would cause or contribute to cultural eutrophication ... shall be provided with the most appropriate treatment as determined by the Department, including, where necessary, ... HBPT...." The concept of HBPT has been retained from the previous provision "Control of Eutrophication", it is not a term that is being introduced into the WQS at this time. MassDEP has proposed to define HBPT as the most appropriate treatment on a regional basis to acknowledge that treatment deemed appropriate in other regions of the country, or nationally, may not be appropriate for Massachusetts. In using the term regional, MassDEP does not intend to determine HBPT based on different regions of the State, but, instead, based on what is the appropriate treatment for this particular region of the United States. While the definition states that "HBPT effluent limitation guidelines reflect the best performance technologies for a particular pollutant or group of pollutants that are economically achievable" this does not mean that HBPT automatically would be required to control nutrients. Under the nutrient provision, HBPT would be required where necessary to comply with criteria. Where compliance with criteria is not achievable, and a use is proposed to be removed, then the issue of a use attainability analysis would come into play. Regarding the issue of cost effective and reasonable BMPs for nonpoint sources of nutrients, there are various types of BMPs available to control nutrients. Those that would be reasonable and cost effective in any given context would be based in large part on the specifics of the site and the practices and activities that result in contribution of nutrients to surface waters.

34. Nonpoint sources: A commenter stated that the WQS appear to require permitting of or regulation of nonpoint sources without clearly specified authority or a framework for doing so.

Response: The prior WQS addressed nonpoint sources in the context of controlling nutrients under the eutrophication provision. Now, the issue of eutrophication is addressed in the narrative nutrient criteria provision. Both the prior and the revised provisions address nonpoint sources of nutrients through the requirement for BMPs. Accordingly, this approach to addressing nonpoint sources in the WQS is not new. Additionally, under the Federal Clean Water Act, states are required to address nonpoint sources through the development of load allocations for impaired waters in the context of developing TMDLs and TMDL implementation plans. MassDEP's authority to address nonpoint sources within the context of the WQS is consistent with this federal requirement. Additionally, stormwater permitting is yet another framework for addressing nonpoint sources and in that context as well, the applicability of the WQS is a factor.

35. Nutrient criteria: Comments on the nutrient criteria included that there should be numerical nutrient criteria and that the WQS should contain the EPA ecoregion criteria.

Response: The adoption of EPA's proposed nutrient criteria for various ecoregions is one option, although perhaps not the best science, since the EPA criteria are based strictly on statistics. MassDEP instead views nutrient criteria based on effects, such as concentrations of algae, sounder science and, therefore, is pursuing this avenue while still considering EPA recommendations. MassDEP, through its own efforts and through a contract with USGS, has been gathering data for the development of nutrient criteria. These data now are being analyzed to derive guidance for specifying nutrient criteria or for translating the current narrative criterion into numeric values for specific cases. The analysis is expected to be completed within the year.

36. Toxic pollutants: EPA commented that the WQS should incorporate EPA's post 2002 toxics criteria, the provision on accumulation of pollutants should expressly protect wildlife, in addition to the language already protecting humans and aquatic life, and that MassDEP should clarify that the public notice requirements pertain to effluent limitations rather than the EPA criteria.

Response: Because the post 2002 EPA recommended toxics criteria were not subject to public notice and review as part of the proposed WQS revisions, MassDEP did not adopt them at this time. MassDEP intends to propose the latest EPA criteria into the next WQS revisions. In the meantime; however, when making CWA decisions such as permitting, we will take into account EPA's updated criteria. The final WQS reflect EPA's other comments on the toxics provisions.

37. CSOs: Comments on CSO designated waters included that the WQS need to clarify what criteria are applicable to CSO designated waters and that the WQS should define B(CSO) and SB(CSO).

Response: MassDEP agrees that the WQS should be clearer relative to CSO designated waters. Accordingly, we have explained in the WQS partial use, B(CSO) and SB(CSO) as follows: "these waters occasionally are subject to short-term impairment of swimming or other recreational uses, due to untreated CSO discharges in a typical year, and the aquatic life community may suffer some adverse impact yet is still generally viable. In these waters, the uses for Class B and Class SB waters are maintained after the implementation of long term control measures described in the approved CSO long term control plan, except as identified in such plan." The term CSO is described as follows: "these waters are identified as impacted by the discharge of combined sewer overflows; however, a long term control plan has not been approved or fully implemented for the CSO discharges."

38. Uses higher than national goal uses: Federal agencies questioned the basis for indicating in the WQS that the uses of treated water supply, shellfishing and public water supply are higher than the national goal uses.

Response: These comments pertain to the previous WQS and not to a proposed revision. MassDEP acknowledges that shellfishing and water supply uses are not higher than the national goal uses and has corrected the language in the final WQS.

39. Stressed basins, recharge and stormwater: Comments on the proposed provision that stormwater permittees in high and medium stressed basins shall be required to minimize loss of annual recharge included that the requirement should apply to all basins and that loss of seasonal, rather than annual, recharge should be addressed.

Response: The proposed language was not intended to limit MassDEP's authority to include recharge requirements in stormwater permits. The language also was not intended to be construed to mean that MassDEP could not require minimization of seasonal loss of recharge or as precluding our authority to require minimization of loss of recharge in other basins. Due

to the comments and confusion that the proposed language generated, we decided not to include the provision in the final WQS.

40. Rhode Island sources of public water supply in MA: The Rhode Island Department of Health, along with some other Rhode Island entities, commented that waters within Massachusetts that are a source of public water supply for Rhode Island should be designated as Class A waters in the WQS.

Response: We have listed RI PWS source waters in MA as Class B treated water supply in the WQS tables. Regardless of their designated uses, the existing uses of all waters are required to be protected under the WQS.

41. CSO qualifier for Alewife Brook: Several commenters took issue with the addition of "CSO" relative to Alewife Brook in the tables of the WQS.

Response: The commenters apparently misconstrued the addition of "CSO" in connection with Alewife Brook. MassDEP did not propose to create a subcategory of CSO use for Alewife Brook. Instead, as is the case with various other waters listed in the tables to the WQS, the notation of "CSO" indicates that there are known CSO discharges to the particular water, but the water's Class is unchanged. As noted above, we have explained further the CSO terminology in the final WQS revisions.

42. Listing of Cold Water Fisheries: The MassDF&W and others have requested that we list in the WQS all waters identified by MassDF&W as cold water fishery resources.

Response: We have designated in the WQS tables as cold water fisheries waters on the MassDF&W list for which MassDF&W has adequate data demonstrating that the water both meets cold water criteria and supports a reproducing cold water fish population. For other waters that support a reproducing cold water fish population, the population and habitat are protected under the WQS as an existing use. We have added language to address protection of cold water fish populations and habitat as an existing use.

43. Definition of BAT: A commenter requested us to clarify the proposed definition of BAT so that economically achievable is within an industrial point source category or subcategory.

Response: We have clarified that economically achievable is "for a category or class of point sources."

44. Definition of discharge: EPA commented that in light of recent litigation before the Supreme Court in the *S.D. Warren* case, we suggest that "discharge" be defined to include, but not be limited to discharge of pollutants, to avoid an argument over DEP's authority to issue 401 certifications for activities such as dam relicensing or navigational dredging.

Response: We have revised the definition with the intention of addressing EPA's concerns.

45. Definition of uses: US Fish and Wildlife Service commented that "uses" should be clarified and not modified by lack of impaired designated uses.

Response: We have not revised the definition of "existing use" or "designated use" as we are not of the view that these terms need further clarification.

46. Cooling water intake structures: Comments regarding CWIS included that the proposed language is outside the purposes of the federal Clean Water Act, the MA Clean Waters Act does not authorize regulation of intake structures/withdrawals, the proposed language should be replaced with the federal 316(b) standard.

Response: MassDEP's proposed revision to the temperature criteria at 314 CMR 4.05(3)(b)2; 314 CMR 4.05(3)(c)2; 314 CMR 4.05(4)(a)2; 314 CMR 4.05(4)(b)2; and 314 CMR 4.05(4)(c)2 stated as follows:

"in the case of a cooling water intake structure (CWIS) regulated by EPA under 33 U.S.C. §1251 (FWPCA §316(b)), the Department has the authority under 33 U.S.C. §1251 (FWPCA §401), M.G.L. c. 21, §§26 through 53 and 314 CMR 3.00 to condition the CWIS to assure compliance of the withdrawal activity with 314 CMR 4.00, including, but not limited to, compliance with the narrative and numerical criteria and protection of designated uses."

The purpose of this regulatory affirmation is to make clear in the WQS that MassDEP has existing authority under the above referenced statutes and regulations to condition a CWIS to assure compliance with the WQS. MassDEP's exercise of this authority is not dependent on or affected by whether it expressly references that authority in the WQS. MassDEP believes, however, that the WQS are a relevant regulatory context to put the regulated community on notice that MassDEP has the authority and responsibility under state law and Section 401 of the CWA to evaluate, and if necessary, condition CWISs to assure compliance with the WQS.

MassDEP has independent state law authority to condition CWISs in the context of permitting a discharge of pollutants to MA waters. More specifically, the MA CWA provides that "no person shall engage in any other activity [i.e., other than a discharge of pollutants] which may reasonably result, directly or indirectly, in the discharge of pollutants to waters of the [state] without a currently valid permit from the Department". *M.G.L. c. 21, §43(2) and 314 CMR 3.04 of MassDEP's Surface Water Discharge Permit Regulations.* As an integral component of a cooling water operation, a water withdrawal through a CWIS is an "activity" that directly results in a thermal discharge. A thermal discharge is a discharge of "pollutants," which is broadly defined in M.G.L. c. 21, §26A of the MA CWA to include "heated effluent." On that basis alone, a water withdrawal for cooling water purposes is an activity that is subject to MassDEP's permit jurisdiction under the MA CWA.

The MA CWA further provides that in addition to specifying effluent limits, MassDEP permits may specify "technical controls and other components of treatment works to be constructed or installed...which [MassDEP] deems necessary to safeguard the quality of the receiving waters". M.G.L. c. 21, §43(7). "Treatment Works" is broadly defined to include "any and all devices, processes and properties, real or personal, used in the collection, pumping, transmission...recycling...or reuse of waterborne pollutants." M.G.L. c. 21, §26A and 314 CMR 3.02. Thus, in addition to a cooling water withdrawal being an activity directly related to a discharge of pollutants, the CWIS also constitutes an integral component of permitted facility's cooling water "treatment works". MassDEP is authorized, therefore, to impose permit conditions on a CWIS.

MassDEP may also modify, suspend or revoke any outstanding permit for cause, including, any change in or discovery of conditions that calls for the reduction or discontinuance of the "authorized discharge or activity". (Emphasis added). 314 CMR 3.13(1). This regulatory provision is a further affirmation of the Department's position that an "activity", as distinct from a "discharge," may also be regulated in a surface water discharge permit.

The broad reach of the MA CWA and the Surface Water Discharge Permit Regulations governs how the Department interprets and applies its Surface Water Quality Standards. The stated purpose of the standards in 314 CMR 4.01(4) include to "designate the most sensitive uses for which the various waters of the [state] shall be enhanced, maintained and protected," and to set forth regulations "necessary to achieve the designated uses". More specifically, 314 CMR 4.05 classifies and identifies the designated uses of the state's surface waters. "Each class is identified by the most sensitive, and therefore governing, water uses to be achieved and protected," and "shall be regulated by the Department to protect and enhance the designated uses." 314 CMR 4.05 (1). The regulations establish the *minimum* water quality criteria applicable to each class of inland and coastal surface waters. 314 CMR 4.05(2).

When the relevant provisions of MassDEP's Surface Water Discharge Permit Regulations and Surface Water Quality Standards are read together, it is clear that a permitted CWIS must

allow for attainment of the designated uses of state receiving waters, as required by the MA WQS.

314 CMR 3.07(4) states that MassDEP shall not issue a permit "when the imposition of conditions cannot ensure compliance with the applicable water quality requirements of all affected States." This regulatory prohibition does not narrow the scope of permit conditions to only those applying directly to the discharge. MassDEP is also authorized under 314 CMR 3.11(11)(a) to include in a permit "any requirements established under a state or other appropriate certification under 33 U.S.C. 1251 §401."

As discussed below, MassDEP's authority under Section 401 of the CWA includes placing conditions on a permit applicant's activity as a whole to ensure compliance with state water quality standards. Accordingly, the language of 314 CMR 3.11(11)(a) is an express regulatory affirmation that the Department has independent state permit authority to condition a permit applicant's activity as a whole consistent with the scope of the Department's certification authority under Section 401 of the CWA.

The United States Supreme Court has affirmed that if there is a discharge to trigger application of the state water quality certification provisions under Section 401 under the CWA, a state may place conditions on the permit applicant's activity as a whole to ensure compliance with any applicable water quality standard or other requirement of state law. *PUD No.1 of Jefferson County v. Washington MA DEP of Ecology, 511 U.S. 700, 711-712 (1994).* Because Section 401(d) refers to the compliance of the applicant, not the discharge, the Court held that a state is authorized to impose "other limitations" on the project in general to assure compliance with the CWA and other appropriate requirements of state law.

In summary, in addition to discharges, MassDEP has state law authority to regulate "activities that may reasonably result, directly or indirectly in a discharge" and "treatment works," and to take action to address "activities" authorized in a permit. Cooling water withdrawals associated with a permitted discharge fit under all of these state regulatory bases for permitting.

In addition, it is well established that MassDEP has authority under Section 401 of the CWA to impose conditions on a CWIS as part of its state water quality certification of a federal NPDES permit. The Supreme Court's decision in *PUD No. 1* also definitively addressed the issue of whether a state may rely on the designated uses component of its WQS to impose additional conditions on the permitted activity. Rejecting the petitioners' argument that they could only be required to comply with specific numerical criteria in the WQS, the Court determined that Section 303 of the CWA clearly provides that WQS are made up of both numeric criteria and designated uses. The Court concluded that a project that does not comply with a designated use does not comply with the WQS and, therefore, a state's water quality certification may condition the project to assure compliance with the designated uses.

More recently, the Second Circuit, in reviewing an appeal of EPA's Phase I Section 316(b) CWIS Rule, relied on the Supreme Court's decision in *PUD No. 1* to affirm a provision of the Rule that, consistent with Section 401 of the CWA, provides that a facility must comply with any more stringent requirements related to a CWIS that are reasonably necessary to comply with state law. *See Riverkeeper, Inc. et al. v. EPA, 358 F.3d 174 (2d Cir. 2004).* The Court noted that Section 510 of the CWA, which expressly allows states to set standards higher than EPA's, refers to the state standards or limitations respecting "discharges" of pollutants. The Court concluded, however, that Congress did not intend to prevent states from imposing tougher standards on CWIS alone and deferred to EPA's reasonable interpretation of its authority under this section of the CWA.

Earlier this year, EPA's Environmental Appeals Board, in its review of an appeal of the NPDES permit for the cooling water operation at Brayton Point Station in Somerset, MA, cited the *PUD No. 1* decision as the basis for its conclusion that the designated uses in MA's WQS could potentially be relied upon by MassDEP to regulate CWISs in a Section 401 water quality

certification. *See In re: Dominion Energy Brayton Point, LLC, Remand Order at 186-187 (February 1, 2006).*

In conclusion, MassDEP intends to retain the above referenced revisions to the WQS in the final regulation, with the added clarification that existing uses are to be protected, because the language accurately summarizes MassDEP's existing authority to condition CWISs in the context of a discharge permit. In addition, this regulatory affirmation in the relevant sections of the WQS appropriately highlights the nexus between impacts from CWISs and whether such permitted activity will result in compliance with WQS, including the designated uses.

47. Thermal discharges: Comments regarding thermal discharges included that it should be clarified that 316(a) variances trump other WQS criteria/provisions, not just temperature; "remain protective" should be deleted or defined as the demonstration required under the federal Clean Water Act and not more; 316(a) limits supersede WQS; DEP should adopt the federal standard.

Response: MassDEP's proposed revision to the temperature criteria at 314 CMR 4.05(3)(b)2; 314 CMR 4.05(3)(c)2; 314 CMR 4.05(4)(a)2; 314 CMR 4.05(4)(b)2; and 314 CMR 4.05(4)(c)2 stated as follows:
"Alternative effluent limitations established in connection with a variance for a thermal discharge issued under 33 U.S.C. §1251 (FWPCA §316(a)) and 314 CMR 3.00 are in compliance with 314 CMR 4.00. As required by 33 U.S.C. §1251 (FWPCA §316(a)) and 314 CMR 3.00 for permit and variance renewal, the applicant must demonstrate that alternative effluent limitations remain protective."

The first sentence in above proposed regulatory revision is a refined restatement of language in the existing WQS and does not represent a substantive change in the way that MassDEP views the relationship between a thermal discharge variance granted in accordance with Section 316(a) of the CWA and 314 CMR 3.00 and the WQS. No further modification of this language is needed.

As the first sentence states, the alternative effluent limits established in connection with such a variance are in compliance with the WQS. In order for the alternative thermal discharge limits to be deemed in compliance with the WQS, MassDEP must concur with EPA, through MassDEP's grant of a the parallel state thermal variance pursuant to 314 CMR 3.00, that the applicant has met the Section 316(a) variance standard. As evidenced by the placement of the above language in the WQS, the grant of a Section 316(a) thermal variance authorizes the use of a less stringent temperature limit than otherwise required by the temperature criteria in the WQS, provided such alternative, site-specific temperature limits will assure the protection and propagation of a balanced and indigenous population of shellfish, fish and wildlife in the receiving water (the "BIP"). The scope of a Section 316(a) variance applies to temperature and does not act to "trump" other criteria in the WQS that the thermal discharge is required to meet.

The intent of the second sentence in the above proposed provision was to make explicit that any permittee discharging pursuant to a Section 316(a) variance has an obligation at the time of permit renewal to demonstrate that the variance-based thermal limits will "remain protective", i.e., continue to comply with the variance standard. In response to the comments, MassDEP has revised the sentence as follows to be more precise about the permittee's showing:

As required by 33 U.S.C. §1251 (FWPCA §316(a)) and 314 CMR 3.00 for permit and variance renewal, the applicant must demonstrate that alternative effluent limitations continue to comply with the variance standard for thermal discharges.

48. Establishment of effluent limits/enforcement: Comments regarding establishment of effluent limits/enforcement included that enforcement order authority exceeds authority under the federal Clean Water Act, the language violates permit shield caselaw; if a permittee is in compliance with its permit, no enforcement is allowed.

Response: The proposed revision to 314 CMR 4.03(1) provided, in pertinent part: "Where the Department has not established water quality based effluent limitations in a permit and a violation of water quality standards attributable to a discharge occurs, the Department may further limit the discharge through including, but not limited to, an enforcement order or permit modification."

314 CMR 3.08 ("Effect of a Permit") in MassDEP's surface water discharge permit regulations provides in pertinent part:
(2) Except for any toxic effluent standards and prohibitions under 33 U.S.C. 1251 §307, compliance with a permit during its term constitutes compliance, for the purposes of enforcement, with 33 U.S.C. 1251 §§301, 302, 306, 307, 308, 403, and 4.05.

The above language in 314 CMR 3.08 is derived from the permit shield provision in Section 402(k) of the federal CWA. See also 40 CFR 122.5. MassDEP interprets 314 CMR 3.08 in a manner consistent with EPA's permit shield regulations and policy. Consequently, in the final version of the regulations, MassDEP has revised 314 CMR 4.03(1) as follows:

"Where the Department has not established water quality based effluent limitations in a permit and a violation of water quality standards attributable to a discharge occurs, the Department may modify, suspend or revoke the permit, in whole or in part, for cause in accordance with 314 CMR 3.00."

49. Implicit incorporation of policies/guidance: Some commenters objected that the WQS import BMPs from Stormwater Guidelines, stressed basins from WRC, CWF from MassDF&W, etc. without a proper review process.

Response: The WQS cannot include all relevant policies used to assist MassDEP in applying the WQS. Guidelines and policies, although not appealable, generally reflect outside input.

50. Establishment of effluent limits for 316(a) discharges/reasonable margin of safety: Comments regarding establishment of effluent limits/reasonable margin of safety included that the proposed language is contrary to the federal Clean Water Act for 316(a) discharges.

Response: 314 CMR 4.03(1) states generally that in establishing effluent limitations MassDEP will provide a reasonable margin of safety to account for any lack of knowledge concerning the relationship between the pollutants being discharged and their impact on water quality. The above approach authorized by 314 CMR 4.03(1) also applies when MassDEP establishes alternative thermal effluent limitations pursuant to a Section 316(a) variance. This approach is particularly appropriate in the context of a Section 316(a) variance where the burden is on the permit applicant to demonstrate that the otherwise applicable effluent limits are more stringent than necessary to assure the protection and propagation of the BIP. As is the case in establishing any effluent limit, MassDEP may, as authorized in 314 CMR 4.03(1), take into account the degree of technical uncertainty in determining whether the proposed Section 316(a) variance-based limits will be protective enough to meet the BIP standard.

51. Guidance needed: Some general comments included that where DEP has discretion and where the WQS are vague – e.g. mixing zones, BPJ, naturally occurring, site specific, HBPT & BAT - guidance is needed.

Response: Some flexibility is desirable in the WQS as being too prescriptive can lead to unintended consequences. Where appropriate, MassDEP has guidance - e.g. for mixing zones - and will develop further guidance as needed.